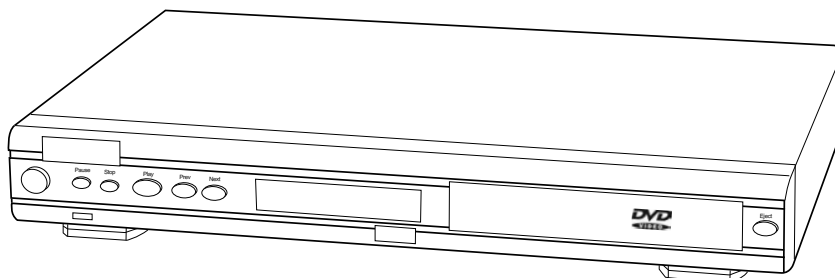


# DVD 321

May we take this opportunity to thank you for purchasing this DVD player. We strongly suggest that you carefully study these operating instructions before attempting to operate the unit, and that you note the listed precautions.

## CONTENTS

- P1. Precautions.
- P2. Safety Information.
- P3. Features.  
Summary of Dolby Digital, Surround,  
Pro Logic and DTS.
- P4. Disc Handling and Maintenance.
- P5/P6. Connections/Audio Connections.
- P7. Remote Control.
- P8. Remote Control Functions.
- P9. Viewing and Listening.  
Front Panel Display.
- P10. Set Up Menu Navigation.
- P11. Troubleshooting.
- P12. Glossary.



## PRECAUTIONS

Please read these precautions before using this unit.

### POWER CORD PROTECTION:

To avoid any malfunctions of the unit, and to protect against electric shock, fire or personal injury, please observe the following:

- Hold the plug firmly when connecting or disconnecting the AC power cord.
- Keep the AC power cord away from heating appliances.
- Never put any heavy object on the AC power cord.
- Do not attempt to repair or change the AC power cord in any way.

### LOCATION:

Avoid placing the unit in areas of:

- Direct sunlight.
- High temperature (over 35 °C).
- High humidity.
- In a dusty environment.

### NON-USE PERIODS:

When the unit is not being used, turn it off. If it is to be left unused for a long period of time, the unit should be unplugged from the household AC outlet.

### KEEP FINGERS AND OTHER OBJECTS OUT OF THE PLAYER:

- Touching internal parts of this unit is dangerous, and may cause serious damage to the unit. Do not attempt to disassemble the unit.
- Do not put any foreign object on the disc tray.

### KEEP AWAY FROM WATER / MAGNETS:

- Keep the unit away from flower vases and other sources of water, if liquids are spilled into the unit, serious damage could occur.
- Keep magnets, or magnetised objects, away from the unit.

### STACKING:

- Place the unit in a horizontal position, and do not place anything heavy on top of it.

### CONDENSATION:

Moisture may form inside the player under the following conditions:

- Immediately after a heater has been turned on.
- In a steamy, or very humid, room.
- When the unit is suddenly moved from a cold environment to a warm one. If moisture forms on this unit, it may not operate properly. In this case, turn off the power and wait for the moisture to evaporate.

### IF THERE IS NOISE INTERFERENCE ON THE TV FROM THE DVD PLAYER:

- Depending on the reception condition of the TV, interference may appear on the TV while you watch a TV broadcast and the DVD is left on. This is not a malfunction of the DVD or the TV. Under these circumstances turn off the DVD.

# SAFETY INFORMATION

## CAUTION:

This unit employs a laser. Due to possible eye injury, only qualified service personnel should remove the cover or attempt to service this device. Use of controls, adjustments, or performance of procedures other than those specified here-in, may result in hazardous radiation exposure.

## NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a residential installation. This equipment generates, uses, and can radiate, radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a mains circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

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This product incorporates copywrite protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by MacroVision Corporation and other rights owners. Use of this copywrite protection technology must be authorised by MacroVision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorised by MacroVision Corporation. Reverse engineering or disassembly is prohibited.

## WARNING:

To reduce the risk of fire, electric shock or annoying interference, do not expose this appliance to rain or moisture and only use the recommended accessories.

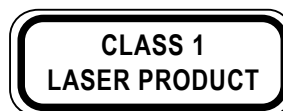


## CAUTION:

To reduce the risk of electric shock, do not remove the cover. No user serviceable parts inside. Refer to qualified service personnel for servicing.

## CAUTION:

VISIBLE AND INVISIBLE LASER RADIATION WHEN OPENED AVOID EXPOSURE TO BEAM (WARNING LOCATION: INSIDE ON LASER COVER SHIELD).



## IMPORTANT SAFETY INSTRUCTIONS:

- 1) Read and keep these instructions available for future reference.
- 2) Heed all warnings.
- 3) For indoor use only.
- 4) Do not use this apparatus where it might get damp.
- 5) Clean only with a dry cloth.
- 6) Do not block any of the ventilation openings, install in accordance with all instructions.
- 7) Do not install near any heat sources such as radiators or other apparatus ( including amplifiers ) that produce heat.
- 8) Protect the power cord from being damaged.
- 9) Only use attachments / accessories specified by the manufacturer.
- 10) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 11) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way; such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

This DVD player is Double Insulated, when servicing use only identical replacement parts.

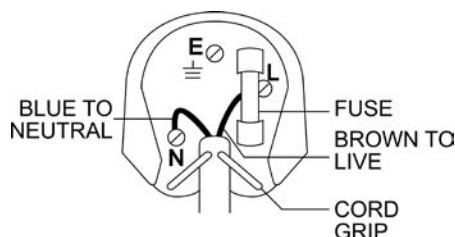
## UK MAINS PLUG DETAILS:

For your convenience a mains plug with a fuse (3 Amp) has been fitted to this appliance. For your safety please observe the following information.

The DVD player is designed to operate on AC mains supply between 220 and 240 volts, 50 Hz.

The wires in the mains lead are coloured in accordance with the following code:

BLUE	NEUTRAL
BROWN	LIVE






# FEATURES

## DVD: A completely new dimension in video entertainment

- Subtitles may be displayed in one of up to 32 languages.
- The audio soundtrack can be played in many languages (dependant on the DVD disc used).
- The multi-angle function allows you to choose the viewing angle of scenes which were shot from a number of different angles (limited to DVD discs recorded with multiple camera angles).
- **Supports MP3 & DTS playback.**
- **High quality digital audio.**
  - With linear PCM sound from 48 KHz/24 bit through to 96 KHz/24 bit, audio quality exceeds that of an audio CD player.
- **Many convenient features**
  - Direct access of favourite scenes (title/chapter/time/track search).
  - Parental lock settings to prevent playing discs unsuitable for young viewers (DVD only).
- **Compatible with PAL and NTSC DVD discs**
  - This DVD player can be set to play discs in PAL or NTSC format, or both (multi-system). However, the DVD player must be connected to a suitable TV to play PAL DVD disc or NTSC DVD disc.
  - Compatible with audio CD, as well as DVD.

## Disc formats supported by this player:

Suitable disc	Diameter / Side / Layer	Maximum playing time
	DVD 12cm / Single / Single 12cm / Single / Double 12cm / Double / Single 12cm / Double / Double	MPEG II TYPE 133min ( 4.7GB )Max 242min (8.5GB )Max 266min (9.4GB )Max 484min (17GB )Max
	CD-DA 12cm / Single / Single	74min Max
	CD-DA 12cm / Single / Single	20min Max
	MP3 8cm / Single / Single 12cm / Single / Single	MPEG I Layer III 640min Max

## Summary of Dolby Digital, Dolby Surround, Dolby Pro Logic, and DTS

Almost every DVD disc has audio in Dolby Digital format. DTS is an optional audio format that can be added to a disc in addition to Dolby Digital audio. Dolby Digital and DTS can store mono, stereo, and multi channel audio (usually 5.1 channels).

Every DVD player has an internal Dolby Digital decoder. The DVD 321 has a built-in 2 channel decoder which turns Dolby Digital into standard analog stereo audio, which can be fed to most types of audio equipment using a stereo audio cable.

Dolby Surround is a standard audio mixing technique that adds a rear channel and a centre channel onto a 2-channel signal. A Dolby Surround signal can be played on any stereo system, in which case the rear- and centre - channel sounds remain mixed in with the left and right channels. When a Dolby Surround signal is played on a multi channel audio system, the extra channels are extracted to feed centre speakers and rear speakers. The original technique of decoding Dolby Surround, called simply Dolby Surround, extracts only the rear channel. An improved decoding technique, Dolby Pro Logic, also extracts the centre channel. Dolby Pro Logic II extracts both the centre channel and the rear channel signals and also processes the audio channels to create more of a 3D audio environment. Dolby Surround is independent of the storage or transmission format. In other words, a 2 - channel Dolby Surround signal can be analog audio, broadcast TV audio, digital PCM audio, Dolby Digital, DTS, MP3, audio on a VHS tape, etc.

Unlike Dolby Surround, Dolby Digital encodes each channel independently. Dolby Digital can carry up to 5 channels (left, centre, right, left surround, right surround) plus an omnidirectional sub-woofer (LFE - Low Frequency Effects channel). The built-in, 2-channel Dolby Digital decoder in every DVD player handles multi channel audio by "down mixing" it to two channels using Dolby Surround. This allows the analog stereo outputs to be connected to just about anything, including TVs and Hi Fi systems with Dolby Pro Logic capability. DVD players also output the down mixed 2-channel Dolby Surround signal in digital PCM format, which can be connected to a digital audio receiver, most of which can decode to Dolby Pro Logic.

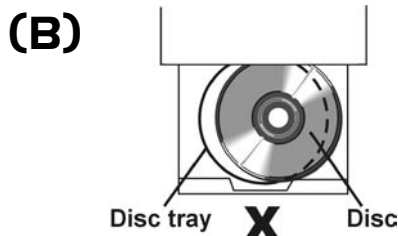
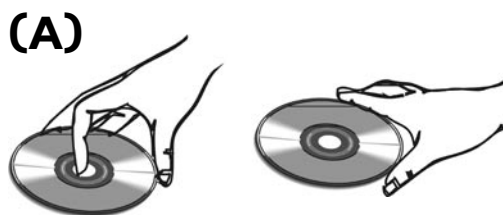
The DVD 321 player also output the "raw" Dolby Digital signal for connection to a receiver with a built-in Dolby Digital decoder.

The DVD 321 player has a DTS Digital Out feature, which sends the raw DTS signal to an external receiver with a DTS decoder.

# DISC HANDLING AND MAINTENANCE

## HANDLING PRECAUTIONS:

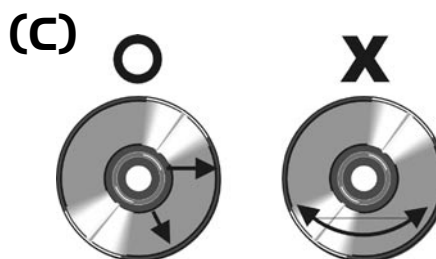
Hold disc by the edges so the surface will not be soiled by fingerprints. **(A)** Fingerprints, dirt and scratches can cause skipping and distortion. Do not write on the label side with a ball-point pen or other writing instruments. Do not use record cleaning spray, benzine, thinners, static electricity prevention liquids or any other solvents. Be careful not to drop or bend the disc. Do not install more than 1 disc on the disc tray.



Do not try to close the disc tray when the disc is not installed properly **(B)**. Be sure to store the disc in its case when not in use.

## If the surface is soiled (C):

Wipe gently with a soft, damp (water only) cloth. When wiping discs, always move the cloth from the centre hole towards the outer edge. (if you wipe the disc using a circular motion, circular scratches are likely to occur, which will cause noise).



## If the disc is brought from a cold to a warm environment, moisture may form on the disc:

Wipe the moisture off with a soft, dry, lint-free cloth before using the disc.

## Improper disc storage:

You can damage discs if you store them in the following places:

- Areas exposed to direct sunlight.
- Humid or dusty areas.
- Areas directly exposed to a heat outlet or heating appliance.

## Discs which cannot be played on this player:

CDV, CD-G, some rewritable DVDs, photo CDs.

## General Maintenance:

Be sure to turn the unit off and disconnect the AC power cord before doing any maintenance on the unit.

Wipe with a dry soft cloth.

If the surfaces are extremely dirty, wipe clean with a cloth which has been dipped in a weak soap-and-water solution and wrung out thoroughly, and then wipe again with a dry cloth.

Never use alcohol, benzine, thinners, cleaning fluids or other chemicals. Do not use compressed air to remove dust.

## REGION CODING:

Since DVD movies are released at different times around the world, all DVD discs are "region coded" and will only play in a DVD player of the same region. If you try and play a different region disc an error message will be displayed on the TV screen.



The world is divided into 6 main regions, and the discs are identified by the region number superimposed on a world globe:

Region 1: Canada, USA, US Territories.

Region 2: Europe, Middle East (including Egypt).

Region 3: Southeast Asia, East Asia (including Hong Kong).

Region 4: Central America, South America, Mexico, Australia, New Zealand, Pacific Islands, Caribbean.

Region 5: Russian Federation, Africa (not Egypt), North Korea, Mongolia.

Region 6: China.

Please contact your hardware retailer or manufacturer for further information on region codes or RCE - Regional Coding Enhancement.

# CONNECTIONS

**Model 321 features** - Dolby Digital 2.0 stereo (two channels of recorded digital audio - left and right channels)

## Connecting your DVD player into your Audio/Video system

### SCART Lead:

The all-in-one connection SCART lead - contains:

- Composite video signal
- RGB video signal
- Stereo sound

The simplest installation to most TVs, giving picture and sound from the TV set only.

### Individual video outputs:

- Composite video (CVBS) using single RCA video connector (usually a yellow lead and connector) to send digital video signals to a TV with a digital video input (some TVs have A/V IN sockets - connect V IN to the video output socket on the DVD player).

**Note** - to get best picture quality use only a digital RCA lead not an audio RCA lead.

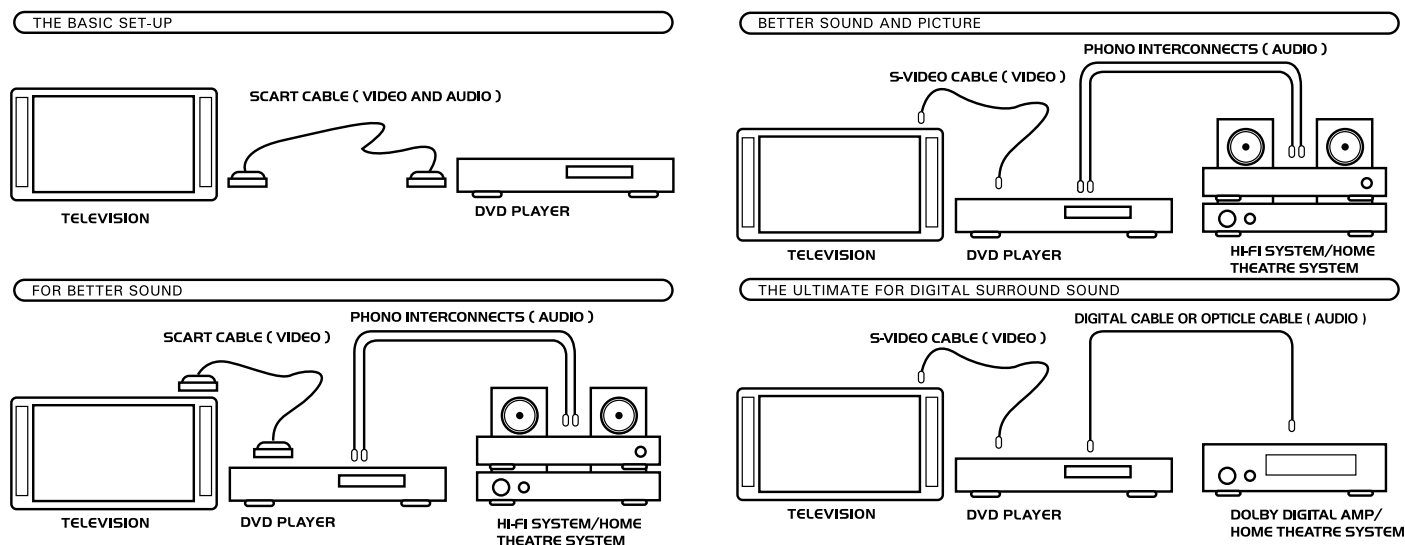
- S-video - (4-pin connector) Provides separate video signals (brightness Y and two colour signals C). For TVs with S-video socket.

### Individual audio outputs:

- Analogue (decoded) outputs:

**DVD 321** - two phono sockets for Right and Left audio channels. Connect to a stereo Hi Fi system, the A IN sockets on a TV set with A/V IN sockets, or the stereo inputs of a Home Theatre System (to produce stereo or simulated surround sound).

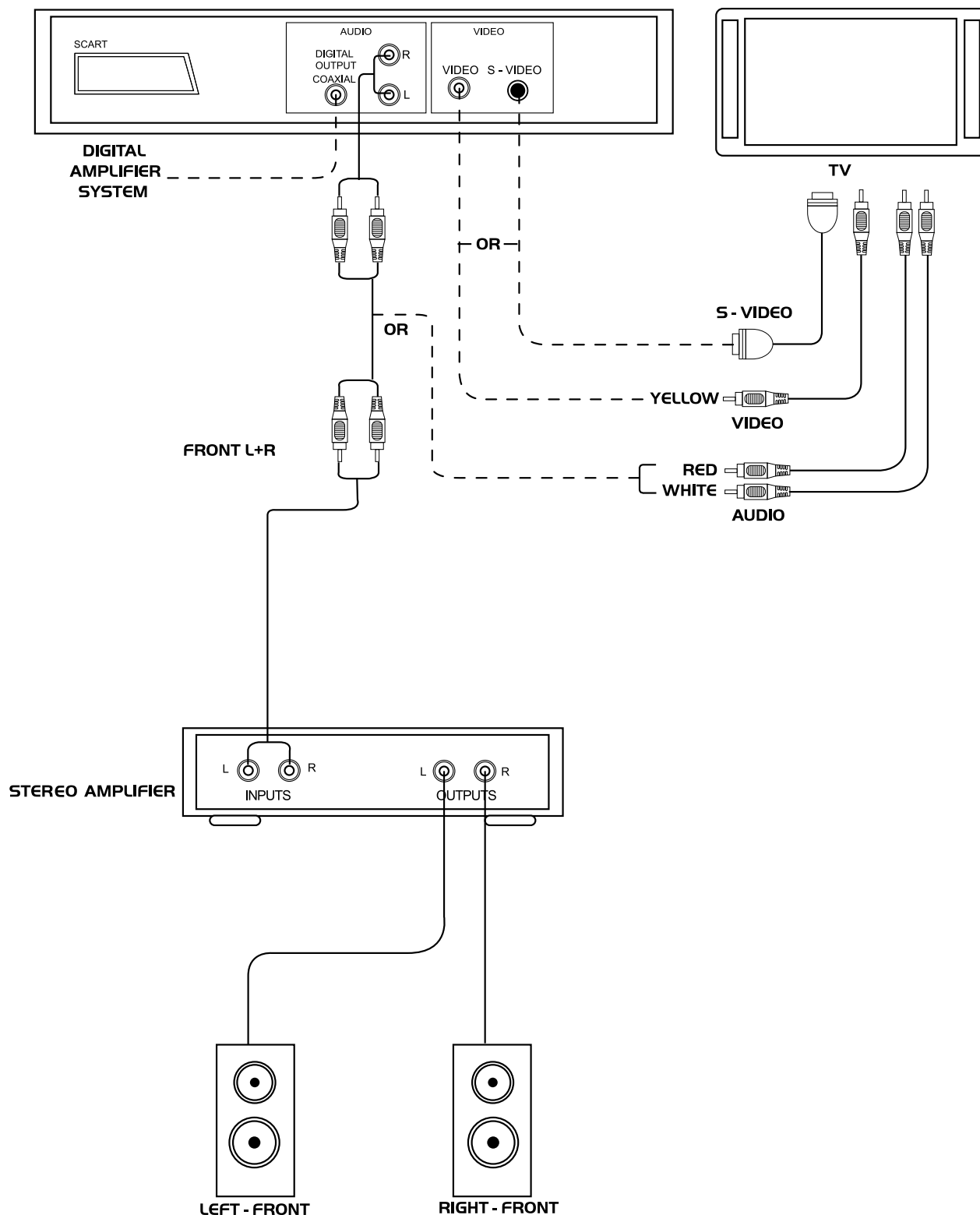
- Digital Audio (RCA coaxial) - all channels (non-decoded) output as one digital audio stream using an RCA lead. Connect to a suitable amplifier with a digital input and a Dolby Digital decoder to enjoy full surround sound, or an amplifier with a digital input (no decoder) to enjoy the full sound track in stereo only.



# SYSTEM CONNECTION

321 - CONNECTION OPTIONS TO STEREO SOUND SYSTEM OR  
DIGITAL AMPLIFIER, WHEN NOT USING A SCART LEAD.

----- INDICATES ALTERNATIVE  
CONNECTIONS



# REMOTE CONTROL

## Battery Installation

Insert the batteries observing the correct (+) and (-) polarities as illustrated.

- If the remote control unit only works when it is operated near the player, replace the batteries.
- Use size 'AAA' batteries.

## NOTE

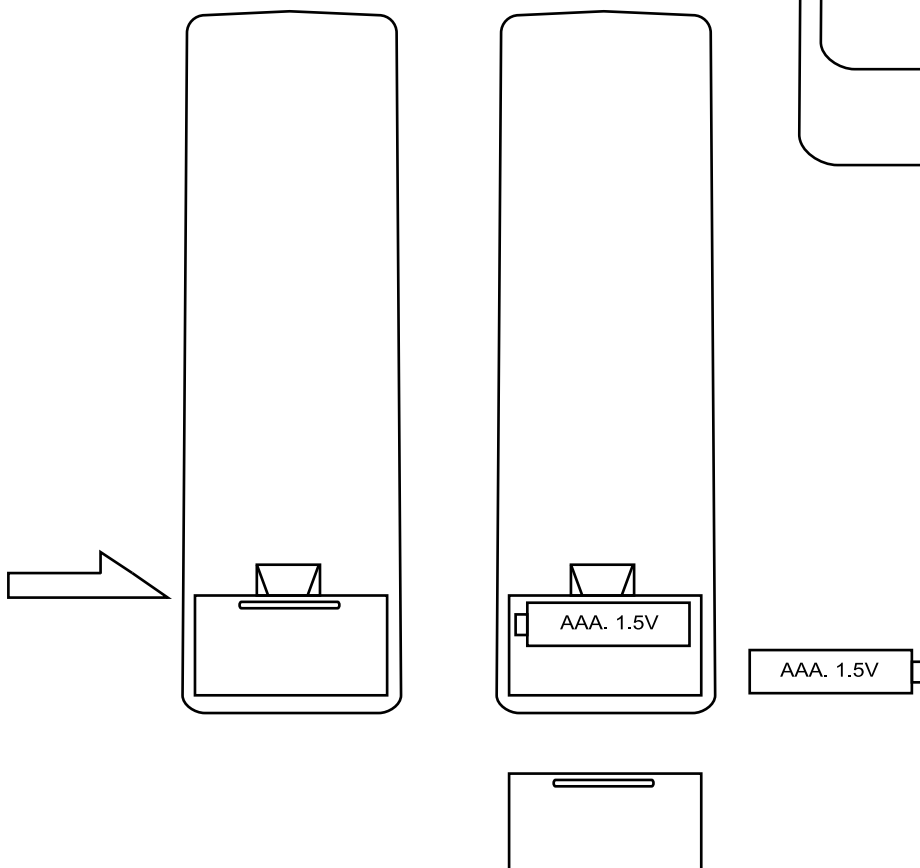
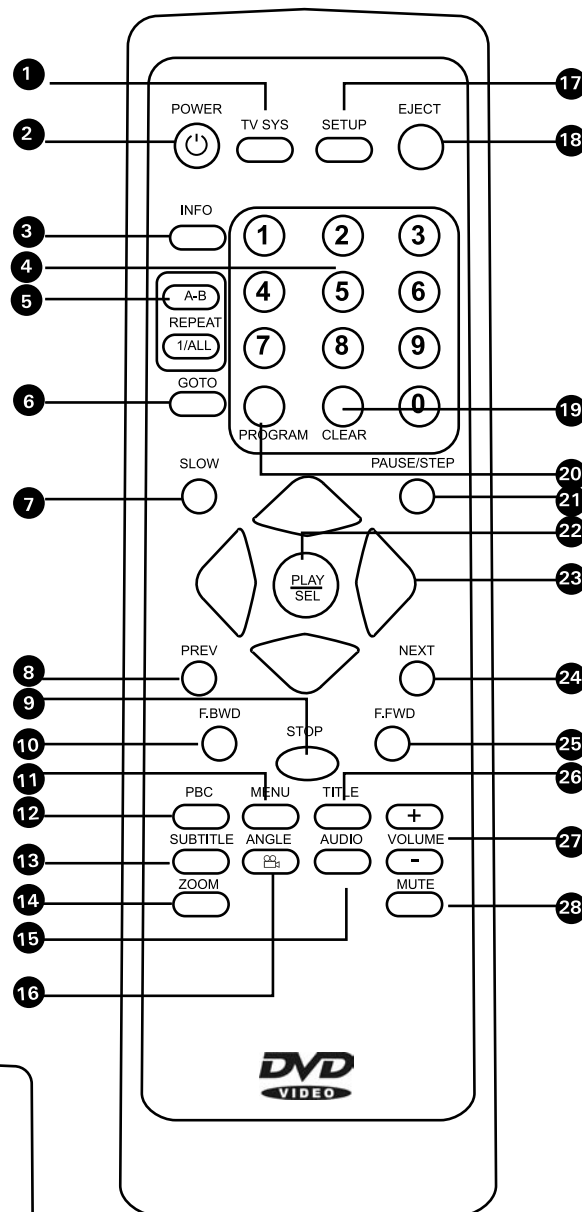
- Do not use rechargeable (Ni-Cd) batteries.
- Do not attempt to recharge or short circuit the batteries.
- Do not drop, step on or otherwise cause shock to the remote control unit. This may damage the unit or lead to malfunctioning.
- Do not mix old and new batteries.
- If the remote control unit is not going to be used for a long time, remove the batteries, otherwise electrolyte may leak causing malfunction, and also burns if skin contact is made with the electrolyte.
- Wipe away any electrolyte leaked inside the remote control unit, and install new batteries.
- If any electrolyte should come into contact with hands, wash it off thoroughly with water.
- If it comes into contact with your eyes or is swallowed, wash thoroughly and seek medical attention.

## REMOTE CONTROL OPERATION RANGE

Point the remote control no more than 7 m from the remote control sensor and within about 60° of the front of the unit.


## NOTE

- Do not place objects between the remote control unit and the remote control signal sensor.
- Operating this remote control unit while simultaneously operating the remote control unit of any other equipment may cause interference.



## REMOTE CONTROL FUNCTIONS

Basic functions can be controlled from the buttons on the front of the DVD player, However the remote controller is needed for advanced operation.

**Note:** if  appears during remote operation, it means you have selected an option that cannot be performed (limited by the type of disc, etc.)

### Remote control operation:

- 1. TV SYS.** Switches the device between ON (ready to play discs - green light) and STAND BY (power saving mode - red light)
- 2. Power.** Repeated pressing of TV SYS selects between the TV standards PAL, NTSC or MULTI. Select according to your TV standard.
- 3. INFO.** Pressing INFO once displays disc summary information, pressing twice gives more detailed information on the disc, pressing a third time clears the INFO display. The information displayed corresponds to:  
Summary information:

Type of disc being played.

 :OFF Subtitle track number (or OFF)


 :2 Soundtrack type number


Elapsed playing time

 :1 Title number

 :3 Chapter number


Detailed Information:


 1/4 Title number selected/total number of titles


 3/5 Chapter number selected/total number of chapters


Elapsed playing time

 TV System selected

 2/4 Soundtrack number/total number of soundtracks

 1/12 Subtitles selected/total number of subtitles

 1/9 Camera angle selected/total number of angles

 DTS Description of soundtrack selected.

**4. NUMERICAL KEY PAD.** Numerical key pad used for selecting tracks, entering data, etc.

**5. REPEAT A-B AND 1/ALL.** To repeatedly play a selected section (A to B) or to repeat the entire disc. Press A-B during playback, at the point where repeat playing is to start. Press A-B again at the point where repeat playing is to stop. Repeat playing of the selected section between points A and B will now start. Press A-B again to cancel repeat playing and return to normal playback (A-B CANCELLED will be displayed on the TV screen). Note that A-B repeat only works within the same chapter of a disc. Repeated pressing of 1/ALL repeats the playback of a chapter, a title, all of the disc, or cancels repeat playing.

**Note:** that the repeat functions only work on discs that support the display of elapsed playing time on the DVD display.

**6. GOTO.** To select a scene by title or chapter number during play, press GOTO, select title or chapter number using the right/left arrow keys, enter the desired chapter or title number using the key pad, and press PLAY/SEL to play the required selection. Single digit title/channel numbers are entered using "0" before the number (so chapter 3 is entered as "03"). To select a scene by time (for example to view a scene 1 hour, 50 minutes and 35 seconds from the start of a chapter): Press GOTO twice, and input the starting time using the key pad (in this example enter 0,1,5,0,3,5 for 1 hour, 50 minutes and 35 seconds). Press PLAY/SEL to advance to the required time.

**Note:** that not all discs support elapsed time display and the GOTO time function.

**7. SLOW.** Press SLOW for slow speed playback. Repeated pressing of SLOW allows selection of play speed  $\times 1/2$ ,  $\times 1/4$ ,  $\times 1/8$ ,  $\times 1/16$ ,  $\times 1/32$  and return to normal playback. Press PLAY/SEL to resume normal playback from any slow speed selection.

**8. PREV.** Press PREV to skip backwards to previous chapters.

**9. STOP.** Press STOP once to hold playing, and press PLAY/SEL to resume playing from the same point. Note that the resume point will be stored even if the DVD player is turned OFF. Press STOP twice to completely stop playing the disc.

**10. F/BWD (Fast Backward).** Fast reverse at  $\times 2$ ,  $\times 4$ ,  $\times 8$ ,  $\times 16$  and  $\times 32$  playing speed can be selected by repeatedly pressing F/BWD. Press PLAY/SEL to return to normal playback.

**11. MENU.** Pressing MENU returns to the ROOT menu to select other titles on a DVD. Press PLAY/SEL to start playback of the selected title.

**Note:** that some discs do not support menu display.

**12. PBC.** Not applicable on DVD 321.

**13. SUBTITLE.** Repeated pressing of SUBTITLE allows you to select the desired language of subtitles to be displayed on the TV screen. Selecting SUBTITLE OFF removes subtitles from the display.

**Note:** that some discs do not support subtitles, or not all subtitle languages will be available.

**14. ZOOM.** Allows you to zoom in to a scene. Repeated pressing of ZOOM allows you to view the scene in  $\times 2$  and  $\times 4$  normal size.

**Note:** that zooming into a scene only allows you to view the central area of interest, and the outer parts of the scene will not be viewable. Repeated pressing of ZOOM until ZOOM OFF is displayed will return to normal viewing ( $\times 1$ ).

**15. AUDIO.** To change the soundtrack type or language press AUDIO during playback. Repeatedly press AUDIO until the desired soundtrack type or language is displayed.

**Note:** that the disc played must support multiple soundtrack type and language selection. The main soundtrack types are 2 channel (stereo), DTS 5.1 channel, or 5.1 Dolby Digital. The on-screen display will show all options available for the disc being played.

**16. ANGLE.** Repeated pressing of ANGLE allows viewing of scenes from different angles. The current selected viewing angle is displayed on the TV screen.

**Note:** that many discs do not support multi-angle display.

**17. SET UP.** Pressing SET UP at any time allows you to enter the various set up menus (see page 10) During SET UP any disc being played will stop, playback will resume from when SET UP was selected. Press SET UP again to resume playing discs.

**18. EJECT.** Press EJECT to open the disc tray. Load a disc and press EJECT again to close the tray and read the disc.

**19. CLEAR.** Use the CLEAR button during data entry (for GOTO or PROGRAM options) to clear entered data.

**20. PROGRAM.** To program a disc supporting track/chapter programming. Press PROGRAM during play to display the programming menu, and input the required track numbers (using 3 digits for each track number) so enter "001" for track 1, etc. Press PLAY/SEL to enter to the next track number for the program. Press PLAY/SEL twice to play the programmed tracks.

**21. PAUSE/STEP.** Press PAUSE/STEP once to pause playback. Pressing PAUSE/STEP twice pauses playback and allows you to step forward by one frame each time the PAUSE/STEP button is pressed. Press PLAY/SEL to resume playing at normal speed.

**22. PLAY/SEL.** Use to start playback or to select options and features, start programmed playback, etc.

**23. ARROW KEYS.** Use the up, down, left, right arrow keys to navigate menus to select features, options, etc.

**24. NEXT.** Press NEXT to skip to subsequent chapters.

**25. F/FWD (Fast Forward).** Fast forward at  $\times 2$ ,  $\times 4$ ,  $\times 8$ ,  $\times 16$  and  $\times 32$  playing speed can be selected by repeatedly pressing F/FWD. Press PLAY/SEL to return to normal playback.

**26. TITLE.** Pressing TITLE during playback of some discs will display the titles of the disc being played. Use the arrows to select the desired title. Press PLAY/SEL to start playback of the selected title.

**Note:** that some discs do not support title display.

**27. VOLUME (+ and -).** Adjusts the sound output level of the DVD player. Use in conjunction with the TV volume control to set optimum sound level.

**28. MUTE.** Pressing MUTE turns off the sound output from the DVD player. Pressing MUTE again will restore the sound to the previous level.



# VIEWING AND LISTENING

- Switch on the TV, then switch to “VIDEO” or A/V mode.

## **1. SWITCH ON THE POWER.**

- Press the “POWER” switch to activate the device.
- The green light indicates the DVD player is on and ready to play a disc. The blue “DVD” screen will be displayed on the TV.

## **2. INSERT THE DISC**

- Press the “OPEN/CLOSE” button to open the tray. The TV screen and display panel will indicate “OPEN”.
- Insert the disc in the centre of the tray.
- Press the “OPEN/CLOSE” button again, after closing the tray, “CLOSE” will be displayed on the TV screen and on the display panel.
- If the disc supports the “FIRST PLAY” function, the disc will start to play immediately.

## **3. START PLAYING**

- Pressing the “PLAY/SEL” button will start playing the disc.
- If the disc inserted is a DVD disc, the title menu is displayed to select playing or various special playing functions depending on the content of the disc.

## **4. STOP PLAYING**

- Pressing the “STOP” button will immediately stop playing.
- On the display “STOP” will appear.
- Press the “PLAY/SEL” button again to resume playing.
- Press the “STOP” button twice to completely stop playing the disc.

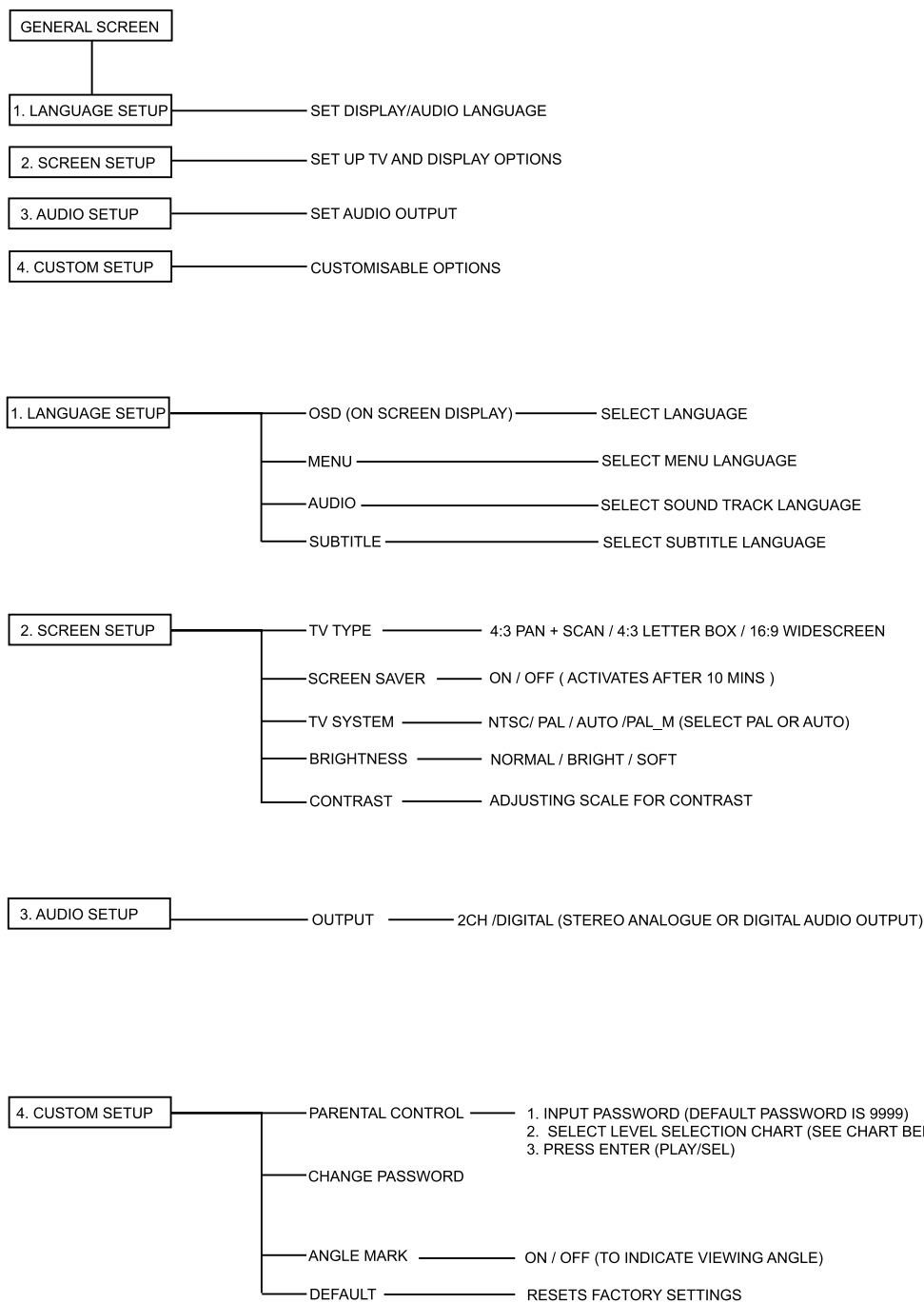
## **5. REMOVE THE DISC**

- Press the “OPEN/CLOSE” button. The screen will display “OPEN”, and the disc can be removed.

## **6. SWITCH OFF THE POWER/STANDBY**

- Pressing “POWER” on the remote will turn the DVD player to “STANDBY”. The green light will turn to red and the TV display will go blank. Reselecting the “POWER” button on the remote will activate the player to “ON”. See “Remote Control” for more advanced controls.

# SET UP MENU NAVIGATION: DVD 32I



MPAA RATING	PARENTAL LEVEL	GENERAL DESCRIPTION
	8	UNRATED (RESTRICTED AUDIENCE)
NC-17	7	ADULT AUDIENCE
R	6	MATURE AUDIENCE
	5	MATURE TEENAGE AUDIENCE
PG-13	4	TEENAGE AUDIENCE
PG	3	MATURE YOUNG AUDIENCE
	2	MOST AUDIENCES
G	1	GENERAL (UNRESTRICTED AUDIENCE)

# TROUBLESHOOTING

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

## **No power.**

- Check the power plug is securely fitted to the power outlet.
- Check the on/off button on the front of the player is set to on.
- Check if there is power at the AC outlet by plugging in another appliance.
- Check the DVD player is not in "Standby".

## **DVD player fails to function.**

- If the player fails to operate (remote control or front panel controls do not work, but display indicates some operation) switch the player OFF and then ON again. If the problem persists, refer to qualified technical personnel.

## **Play fails to start when PLAY is pressed.**

- Check if the disc is defective by trying another disc.
- Check disc is a suitable format.

## **Play commences but then stops.**

- The disc may be dirty and may require cleaning. (See "distorted picture").

## **No picture.**

- Ensure that the equipment is connected properly.
- Ensure that the input setting for the TV is "Video" or "AV".
- Check the TV is switched on.

## **No sound.**

- Ensure that the equipment is connected properly.
- If using a HiFi amplifier, try another sound source.
- Check the Audio Output Setting menu to make sure that the correct audio Output is selected.

## **Distorted sound.**

- Ensure that the input settings for the TV and stereo system are suitable.
- No sound is heard during still picture (pause), slow-motion play or fast forward/reverse play.

## **No audio at Digital Output.**

- Check the digital connections.
- Check the settings menu to make sure that the digital output is set to on.
- Check if the audio format of the selected audio language matches your receiver capabilities.

## **Distorted picture or picture in black and white.**

- Check the disc for fingerprints and clean with a soft cloth, wiping from centre to edge.
- The disc format is not suitable for the TV-set used. Select correct standard PAL/NTSC for TV used.

## **Picture is distorted during fast advance or reverse.**

- The picture will be somewhat distorted when not in "PLAY" mode, this is normal.

## **No fast forward (or fast reverse) play.**

- Discs have sections which prohibit rapid advance or reverse.

## **Incorrect picture size.**

- Choose the correct setup "TV DISPLAY" item which matches the TV set used.
- Check TV settings.

## **No operations can be performed with the remote control.**

- Check the batteries are installed with the correct polarity.
- The batteries may be depleted: replace them with new ones.
- Point the remote control unit at the remote control signal sensor on the front panel.
- Operate the remote control unit at a distance of no more than 7 metres from the remote control signal sensor.
- Remove any obstacles between the remote control unit and remote control signal sensor.

## **Disc does not play.**

- Check the parental setup.

## **Audio soundtrack and/or subtitle language is not the one selected at the initial settings.**

- If the audio soundtrack and/or subtitle language does not exist on the disc, the language selected at the initial settings is not available.

## **No subtitles.**

- Not all discs support subtitles.
- Subtitles are not selected. Press SUBTITLE to display the subtitles.

## **Alternative audio soundtrack (or subtitle) languages cannot to be selected.**

- An alternative language may not be available on some discs.

## **Audio level too low.**

- Most DVD soundtracks have very wide dynamic range, covering from near silence to intense explosions. To support this dynamic range and avoid distortion in reproducing loud and percussive sounds, the average sound volume must be lower than on devices with a smaller dynamic range (such as CD players or VCRs)

## **Error message on DVD/TV display reading "NO DISC"**

- No disc in disc tray.
- Disc upside down (should be printed side up).
- Faulty or unsuitable disc.

In the event of any further problems installing or using the DVD player, please contact either the product retailer or the Acoustic Solutions Help Line on 01327 340601. Please be advised this line is manned 9am to 4.30pm Mon-Fri.

# GLOSSARY OF DVD VIDEO AND AUDIO TERMS

**AC-3** - earlier name for Dolby Digital (digital coding of a number of audio tracks into a digital data bit stream).

**Angle** - Recorded onto some DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.). With such discs, the ANGLE button can be used to view the scene from different angles.

**Aspect ratios** - is the ratio of the width of a TV screen to its height. The standard television screen is 4 units wide by 3 units high or a ratio of 4:3. A widescreen television has an aspect ratio of 16:9. One problem is that cinema screens and TV screens use different aspect ratios, which results in either "letter box" black stripes top and bottom of a TV picture, or black bars on either side of the TV picture. (See Set Up options, and also your TV set up instructions). The "Anamorphic Widescreen" technique allows for better picture quality without altering a film's aspect ratio. When film is put onto DVD, the image is stretched vertically to give better vertical resolution. DVD players are designed to compensate for this, which can cause distortion depending on the type of TV and how it is set up (refer to the TV instruction manual).

**Chapter Number** - A DVD disc title is subdivided into many chapters, each of which is numbered, and specific parts of video presentations can be searched quickly using these numbers.

**Dolby Digital** - digital surround audio system for up to 6 discrete sound channels (5 full-range channels plus one Low frequency effects channel). The DVD 321 includes a 5.1 Dolby Digital decoder giving 6 channels of analogue audio. All DVD players output Dolby digital in bit stream format via optical/coaxial digital outputs. Sound quality using a DVD decoder is considered better than using digital surround amplifier system with a decoder.

**DTS (Digital Theatre Systems)** - digital audio coding system similar to Dolby Digital using different data reduction methods.

**DVD** - a storage medium with capacities ranging from a single-sided, single-layer disc at 4.7 GB, to a double-sided, double-layer disc at 17 GB. There are five types of high-capacity DVD discs. DVD-Video and DVD-ROM are used for the entertainment industry to enable interactive playback of full-length movies and graphic-intensive computer games. DVD-R and DVD-RAM are mainly for use on a computer, being in "write once only" and "rewritable" formats respectively. DVD-Audio is for the music industry enabling vast amounts of high-quality audio on one DVD-Audio disc. The DVD 321 player does not support DVD Audio discs.

**Firmware** - is DVD controller software, stored on a programmable chip within the DVD player. Upgradeable through a firmware Update Patch - contact the Acoustic Solutions Help line for further information (website [www.acousticsolutions.co.uk](http://www.acousticsolutions.co.uk))

**MacroVision** - copy protection system degrades DVD signals when trying to record onto a VCR. Ideally try not to have a VCR connected into an AV system with a DVD player.

**MPEG (Moving Picture Experts Group)** - is the name of the group of standards used for compressing audio and video data. MPEG Video files have the mpg or dat extension and MPEG Audio files have the file extension mp1, mp2, mp3. MPEG-1 has two channels of audio, MPEG-2 currently up to 7.1 channels, and is a standard for compressed video that is used in DVDs.

**MP3 (MPEG Audio Layer 3)** - refers to an audio coder/decoder where an original audio source is compressed with very little loss in sound quality. It is the most popular compression method because of its high compression, which makes it much more practical for downloading from the Internet and storing audio data.

**NTSC** - is the TV standard used in America and the Far East, using 525 horizontal lines refreshed at 60 Hz.

**PAL** - is the European TV standard using 625 horizontal lines refreshed at 50 Hz.

**Note** - The DVD 321 is able to play either NTSC or PAL discs, and can output to a TV of either standard, or a multi-standard TV capable of displaying both standards. (See set up options)

**Pan and Scan** - where the visible part of a wide screen film shown on the TV screen is moved to show where the action is happening.

**PCM** - Pulse Code Modulation. An uncompressed encoding method for digital audio, which is the audio format for recording music CDs.

**Pro Logic** - Dolby Surround Pro Logic decodes the Dolby Surround sound track from the encoded two channels on the DVD disc into four channels - front left and right, centre, and a surround channel.

The main sound tracks are the front left and right channels, with dialogue and other central (from the screen) sounds coming from the centre channel speaker (usually mounted on top of the TV).

**Subtitles** - These are displayed at the bottom of the screen and are a translation or transcription of dialogue. Available on most DVD discs.

**Time** - This is a display of the play time which has elapsed from the start of a disc or a title. It can be used to find a specific scene quickly. (Some discs do not have this feature.)

**Title Number** - These are recorded on DVD discs when a disc contains two or more movies. Separate movie's features are numbered as title 1, title 2, etc.

**Track Number** - These are assigned to tracks which are recorded on most audio CDs. They enable specific tracks to be located quickly.

**THX** - is a quality control system for ensuring optimum sound quality. Reproduction is maintained throughout the many processes involved in making a soundtrack.